



# (WO/2002/082163) SEMICONDUCTOR LASER DEVICE AND SOLID LASER DEVICE USING THE SAME

Biblio. Data Full Text National Phase Notices Documents

Latest bibliographic data on file with the International Bureau

6-5

Pub. No.: WO/2002/082163 International Application No.: PCT/JP2002/002314  
Publication Date: 17.10.2002 International Filing Date: 12.03.2002  
Chapter 2 Demand Filed: 09.10.2002

IPC: G02B 27/09 (2006.01), H01S 5/40 (2006.01), H01S 5/00 (2006.01)

Applicants: NIPPON STEEL CORPORATION [JP/JP]; 6-3, Otemachi 2-chome Chiyoda-ku, Tokyo 100-8071 (JP) (All Except US).  
NIPPON BUNRI UNIVERSITY [JP/JP]; 1727-162, Oaza-Ichigi Oita-shi, Oita 870-0397 (JP) (All Except US).  
YAMAGUCHI, Satoshi [JP/JP]; (JP) (US Only).  
HAMADA, Naoya [JP/JP]; (JP) (US Only).

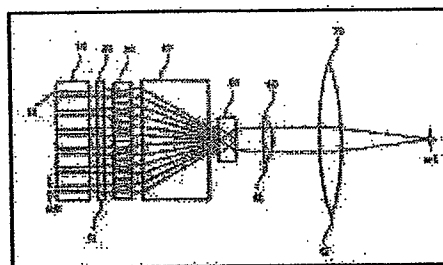
Inventors: YAMAGUCHI, Satoshi; (JP).  
HAMADA, Naoya; (JP).

Agent: ISHIDA, Takashi; A. AOKI, ISHIDA & ASSOCIATES Toranomon 37 Mori Bldg., 5-1, Toranomon 3-chome Minato-ku, Tokyo 105-8423 (JP).

Priority Data: 2001-101454 30.03.2001 JP

Title: SEMICONDUCTOR LASER DEVICE AND SOLID LASER DEVICE USING THE SAME

Abstract: A semiconductor laser device increased in energy density at the focus; and a semiconductor laser excitation solid laser device using the same. A row of dotted-line-wise series-connected laser beams are disposed in front of stack array laser elements emitting a group of two-dimensional array-like parallel laser beams, each row of laser beams refracted substantially normal to the direction of the dotted lines and collimated are received, the direction of the laser beams from emitters or a group of emitters is turned through a right angle and the laser beams are emitted, whereby the laser beams are converted into a plurality of rows of laser beams paralleled substantially in a ladder form, which rows of laser beams are beam-compressed into a row of laser beams, the latter being converted into a series disposition, a row of parallel compressed laser beams are turned through a right angle and emitted, whereby all laser beams are converted into a group of laser beams paralleled in a single row, the group of laser beams being collimated and converged to a focus.



Designated CA, CN, JP, KR, US.

States: European Patent Office (EPO) (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR).

Publication Language:

Japanese (JA)

Filing Language:

Japanese (JA)